

Claims:

1. Polymer of ethylene which has:
a μ_0/μ_2 ratio of at least 13; and
a high load melt index HLM_I lower than 8 g/10 min, and
a value of tan δ at $\omega/\omega_c = 0.01$ of less than 1.3, where δ is G''/G' , ω is the frequency at
5 which G'' and G' are measured and ω_c is the frequency at which $G'' = G'$, and G' and G''
are respectively the elastic modulus and viscous modulus, both measured in Pa at
190°C.
2. Polymer according to claim 1, which has a μ_0/μ_2 ratio of at least 14.
3. Polymer according to claim 1 or 2, having a density D (measured according to
10 ASTM D 792 standard) of between 930 and 955 kg/m³.
4. Polymer according to any preceding claim, having a Pent test value (determined
in accordance with ASTM F 1473-94 standard) higher than 150.
5. Polymer according to any preceding claim, having a polydispersity index greater
than 50.
- 15 6. Process for the preparation of a polymer of ethylene which has a μ_0/μ_2 ratio of at
least 13 and a high load melt index HLM_I lower than 8 g/10 min, wherein ethylene, and
optionally at least one higher alpha-olefin, are contacted with a catalyst comprising
chromium supported on a silica-titania support.
7. Process according to claim 6, which is conducted in the absence of a cocatalyst.
- 20 8. Process according to claim 6 or 7, wherein the polymer is as defined in any one
of claims 1-5.
9. Process according to any one of claims 6 to 8, wherein the catalyst contains
between 0.8 and 1.5 weight % of chromium and between 1.9 and 3.1 weight % of

titanium on the support, based on the weight of the support; and the support has a specific surface area SA (measured in accordance with British Standard BS 4359/1) of between 450 and 550 m²/g, a pore volume PV (measured by BET N₂ analysis using desorption isotherm and considering only radii of pores equal to at least 300 Angstroms) of between 1.8 and 2.7 ml/g, and an average pore diameter between 120 and 200 Angstroms.

5 10. Pipe comprising a polymer of ethylene as defined in any of claims 1-5.

11. Use, for the manufacture of pipes by extrusion, of a polymer of ethylene as defined in any of claims 1-5.

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